

Translation

PATENT COOPERATION TREATY

PCT/JP2003/015588



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference JFKR-72-PCT	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/JP2003/015588	International filing date (day/month/year) 05 December 2003 (05.12.2003)	Priority date (day/month/year) 06 December 2002 (06.12.2002)
International Patent Classification (IPC) or national classification and IPC H01Q 5/01, 9/04		
Applicant FUJIKURA LTD.		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>7</u> sheets, as follows: <div style="margin-left: 20px;"><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</div> b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <div style="margin-left: 20px;"><input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</div>

Date of submission of the demand 14 June 2004 (14.06.2004)	Date of completion of this report 29 September 2004 (29.09.2004)
Name and mailing address of the IPEA/JP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/015588

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- ☐ The international application as originally filed/furnished
- ☒ the description:
- pages _____ 1-8, 10-12, 15-19, 21-24, 26-38 _____, as originally filed/furnished
- pages* _____ 9, 13, 14, 20, 25 _____ received by this Authority on _____ 17 September 2004 (17.09.2004)
- pages* _____ received by this Authority on _____
- ☒ the claims:
- pages _____ 1-33 _____, as originally filed/furnished
- pages* _____, as amended (together with any statement) under Article 19
- pages* _____ 34-39 _____ received by this Authority on _____ 17 September 2004 (17.09.2004)
- pages* _____ received by this Authority on _____
- ☒ the drawings:
- pages _____ 1-24 _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP 03/15588

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-39	YES
	Claims		NO
Inventive step (IS)	Claims	5-8, 12, 16-30, 32, 33, 36-39	YES
	Claims	1-4, 9-11, 13-15, 31, 34, 35	NO
Industrial applicability (IA)	Claims	1-39	YES
	Claims		NO

2. Citations and explanations

Document 1: US 6326921 B1 (Telefonaktiebolaget LM Ericsson), 4 December 2001, entire text; all drawings (Family: none)

Document 2: JP 6-177630 A (Fujitsu Limited), 24 June 1994, entire text; all drawings & US 5455596 A1

Document 3: WO 99/43037 A2 (Qualcomm Inc.), 26 August 1999, paragraphs [0051] to [0053]; fig. 9 & EP 1072064 A & US 6259407 B1 & JP 2002-504766 A

Document 4: US 6157344 A (Xertex Technologies, Inc.), 5 December 2000, fig. 5 & EP 1155471 A & WO 46875 A1 & US 6249254 B1 & US 6157344 A1

Document 5: JP 2002-280825 A (Hitachi Cable, Ltd.), 27 September 2002, fig. 9 (Family: none)

Claims 1 to 4, 9 to 11, 15 and 31

Documents 1 to 3 cited in the international search report

Document 1 sets forth an antenna comprising an inverse F-type antenna having its main radiating element (310) formed opposite the ground (340), and a parasitic element which resonates at a different frequency from the main antenna element, is provided in between the main radiating element (310) and ground (340), and is grounded at one end.

It would be easy for a person skilled in the art to form the ground conductor and antenna element on an insulating substrate as described in documents 2 and 3 in the antenna set forth in document 1.

In addition, it is a known technique not to ground a parasitic element to create a greater bandwidth or to have a plurality of bandwidths, and a person skilled in the art could decide not to ground the parasitic element in document 1 as necessary.

Therefore the invention set forth in claims 1 to 4, 9 to 11, 15 and 31 does not involve an inventive step.

Claim 13

Documents 1 to 4 cited in the international search report

Document 4 indicates that an antenna is disposed on the LCD portion of a notebook PC.

When installing the antenna set forth in document 1 on a notebook PC, it would merely be a design matter which a person skilled in the art could accomplish as necessary to dispose the antenna on the LCD portion of the notebook PC as set forth in document 4.

Claim 14

Documents 1 to 5 cited in the international search report

Document 5 indicates that an antenna is disposed on the corner part of the housing of a notebook PC.

When installing the antenna set forth in document 1 on a notebook PC, it would merely be a design matter to a person skilled in the art to dispose the antenna on the corner part of the housing of a notebook PC as set forth in document 5.

Therefore the invention set forth in claim 14 does not involve an inventive step.

Claims 33 and 34

Documents 1 to 3 cited in the international search report

In document 2, fig. 1, which shows the first embodiment, indicates that an element is formed directly on an element support (20) (corresponding to claim 34 of this application). Fig. 2, which shows the second embodiment, indicates that an antenna is constituted from a flexible substrate (46) which forms the element, and an element support (20) which supports this element (corresponding to claim 33 of this application), and it would be easy for a person skilled in the art to have the antenna set forth in document 1 directly supported by a supporting member, and to have the antenna supported by a fixing member after the antenna is formed on a flexible substrate.

Therefore the invention set forth in claims 33 and 34 does not involve an inventive step.

The invention set forth in claims 5 to 8, 12, 16 to 30, 32 and 35 to 39 is not disclosed in any of the documents cited in the international search report, and would not be easy for a person skilled in the art to conceive of said invention in the light of these documents. Therefore the invention set forth in claims 5 to 8, 12, 16 to 30, 32 and 35 to 39 is novel and involves an inventive step.